

attacks. One of the greatest challenges was designing the shelter's 10-ton clamshell retractable door, which rolls back like a huge eyelid. The shelters also feature state-of-the-art heating, ventilation and air conditioning and control systems.

Capt Brent Gibson headed the multi-disciplinary 49th MMS team that erected the hangars. "The B2SS is very large," he said. "You could fit about five ACH portable aircraft hangars inside of it. The sheer size of the hangar, especially when you have workers up on top of it, gets your attention. Working 60 feet in the air also gets your attention."

"The trusses are huge metal structures that span from one side to the other," Captain Gibson explained. "We used two erection towers forming kind of a tripod, with one person controlling both wenches, to pull the first truss into place. It was then anchored down with cables. Once the first one was in place, each successive truss was attached to the previous one. Watching 25,000 pounds of metal rising from the ground is impressive."

Much of the finish work had to be done by hand. "The covering is composed of huge sheets of fabric that have eyelets that we run rope through," said Gibson, "which means that we have people working on top of the structure, strapped in with harnesses and safety lines. The B2SS is an animal, but it's pretty neat when it comes together."

Other members of the 49th MMS deployed team were impressed with the experience as well. "It was a good learning experience," said SrA Fred Long. "I never knew that much about buildings until this deployment."

"It's rewarding to see the completed structure," added TSgt Lawrence Corron. "It makes all the hard work worthwhile."

Additional military, civilian and contract representatives from HQ ACC, the B-2 SPO, the Air Armament Center and the Air Force Civil Engineer Support Agency supported the combined effort.

"The entire team worked extremely well together," said Captain Gibson. "CMSgt Billy Doolittle from ACC selected a team of highly trained experts and pulled off the impossible. The talent was there, but this team's drive generated its momentum. Each member demonstrated sound leadership, determination, and a commitment to accomplish what had never been done before, and that made all the difference." (*Compiled from interviews by Lois Walker, HQ AFCEA Historian, and an Air Combat Command News Service report.*)



Dual construction towers (visible in front of first truss) were used to erect the B2SS. Both hangars were erected simultaneously.

## Help arrives from CEMIRT, AFCAP

Erecting the B-2 shelters, like most complex projects, relied on teamwork. Members of CEMIRT, the Civil Engineer Maintenance, Inspection, and Repair Team out of the Air Force Civil Engineer Support Agency, helped the 49th Materiel Maintenance Squadron configure and install the electrical system for the hangars, while AFCAP, the Air Force Contract Augmentation Program, provided specialized equipment.

Plans originally called for deploying Harvest Falcon generator sets to provide

electrical power for the hangars. That would have required setting up a prime power plant, a fuel bladder and piping, and deploying power production specialists to run a 24/7 operation and maintain the generators. CEMIRT members did some homework and determined that there was an ample supply of reliable commercial power at the site. In consultation with members of the base engineer staff and the 49th MMS, CEMIRT's Frank Burrier and SSgt Travis Poling designed a connection scheme to hook the hangars to

the existing local power grid.

TSgt Mike Alvarez and SSgt Christopher Burgess, also from CEMIRT, deployed in late October after hangar construction was well underway and the structures were ready to receive power. Working with the 49th MMS electrical team of MSgt Howard Nicewander, SSgt Corey Denny, and SSgt Bob Piispanen, they installed a high-voltage stepdown transformer, high-voltage switches, a primary switch center and cabling according to the design plan. The local base

operating support contractor installed an underground feed to the site.

"Planning for the project took a great deal of time, because at first nobody knew what we were going to do, how we were going to do it, or what we would have to work with," said TSgt Mike Alvarez, CEMIRT team leader. "But once we determined that the local power source was adequate and stable, we were able to come up with a good plan."

"The actual wiring portion of the project was relatively easy, and we were